

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A processor, comprising:

an authentication buffer configured to store authentication data including ciphered-network-packet data subject to authentication, network packet data subject only to authentication and not to ciphering, and network packet data subject to ciphering and authentication, wherein the authentication buffer includes a circular first-in-first-out (FIFO) arrangement; and

at least one authentication core coupled to the authentication buffer to authenticate the authentication data from the authentication buffer.

2. (Previously Presented) The processor of Claim 1, wherein the circular FIFO arrangement includes a moveable start of data pointer and a moveable end of data pointer.

3. (Currently Amended) The processor of Claim 1, wherein the network processor further includes at least one cipher core adapted to operate with a cipher algorithm and the at least one authentication core is adapted to operate with an authentication algorithm, and a size of the authentication buffer is selected in accordance with a data block size associated with the cipher algorithm and a data block size associated with the authentication algorithm.

4. (Previously Presented) The processor of Claim 1, wherein the authentication core is adapted to authenticate the authentication data from the authentication buffer as blocks of authentication data.

5. (Currently Amended) A network, comprising:

a network processor comprising ~~having~~:

an authentication buffer configured to store authentication data ~~including~~
~~at least one of~~ comprising ciphered-network-packet data subject to authentication,
network packet data subject only to authentication and not to ciphering, and
network packet data subject to ciphering and authentication, wherein the
authentication buffer includes a circular first-in-first-out (FIFO) arrangement; and

at least one authentication core coupled to the authentication buffer to
authenticate the authentication data from the authentication buffer.

6. (Previously Presented) The network of Claim 5, wherein the circular FIFO arrangement includes a moveable start of data pointer and a moveable end of data pointer.

7. (Original) The network of Claim 5, wherein the network processor further includes at least one cipher core adapted to operate with a cipher algorithm and the at least one authentication core is adapted to operate with an authentication algorithm, and a size of the authentication buffer is selected in accordance with a data block size associated with the cipher algorithm and a data block size associated with the authentication algorithm.

8. (Original) The network of Claim 5, wherein the authentication core is adapted to authenticate the authentication data from the authentication buffer as blocks of authentication data.

9. (Currently Amended) A method of authenticating network packet data, comprising:

moving to an authentication buffer authentication data, the authentication buffer configured to store the authentication data including at least one of comprising ciphered-network-packet data subject to authentication, network packet data subject only to authentication and not to ciphering, and network packet data subject to ciphering and

authentication, wherein the authentication buffer includes a circular first-in-first-out (FIFO) arrangement; and
moving to an authentication core a block of data from the authentication buffer.

10. (Original) The method of Claim 9, wherein the moving to an authentication buffer authentication data comprises selecting the authentication buffer from among a plurality of authentication buffers.

11. (Original) The method of Claim 9, further including:
setting a start of data pointer and an end of data pointer to respective initial locations;
setting the end of data pointer in accordance with the moving the authentication data to the authentication buffer; and
setting the start of data pointer in accordance with the moving to the authentication core the block of data from the authentication buffer.

12. (Previously Presented) The method of Claim 9, wherein the circular first-in-first-out (FIFO) arrangement includes a moveable start of data pointer and a moveable end of data pointer.

13. (Original) The method of Claim 9, further including:

providing a cipher core adapted to operate with a cipher algorithm;
providing the authentication core adapted to operate with an authentication algorithm, and
sizing the authentication buffer in accordance with a data block size associated with the cipher algorithm and a data block size associated with the authentication algorithm.

14. (Currently Amended) A computer storage readable medium that stores instructions thereon to authenticate network packet data, the instructions causing a machine to:

move to an authentication buffer authentication data, the authentication buffer configured to store the authentication data comprising ~~including at least one of~~ ciphered-network-packet data subject to authentication, network packet data subject only to authentication and not to ciphering, and network packet data subject to ciphering and authentication, wherein the authentication buffer includes a circular first-in-first-out (FIFO) arrangement; and

move to an authentication core a block of data from the authentication buffer.

15. (Previously Presented) The medium of Claim 14, wherein the instructions causing a machine to move to an authentication buffer authentication data comprises

instructions causing a machine to select the authentication buffer from among a plurality of authentication buffers.

16. (Previously Presented) The medium of Claim 14, further comprising instructions causing a machine to:

- set a start of data pointer and an end of data pointer to respective initial locations;
- set the end of data pointer in accordance with the moving the authentication data to the authentication buffer; and
- set the start of data pointer in accordance with the instructions for moving to the authentication core the block of data from the authentication buffer.

Claim 17 (Cancelled)

18. (Previously Presented) The medium of Claim 14, further comprising instructions causing a machine to:

- provide a cipher core adapted to operate with a cipher algorithm;
- provide the authentication core adapted to operate with an authentication algorithm, and
- size the authentication buffer in accordance with a data block size associated with the cipher algorithm and a data block size associated with the authentication algorithm.